

We claim:

1. A method comprising:
 - outputting a first color calibration target using a first color printing technology onto media having a second color calibration target already output thereon using
 - 5 a second color printing technology;
 - determining color differences between the first color calibration target and the second color calibration target; and,
 - calibrating the first color printing technology based on the color differences between the first color calibration target and the second color calibration target.
- 10 2. The method of claim 1, wherein calibrating the first color printing technology based on the color differences between the first and the second color calibration targets allows for subsequent output of the first color calibration target to better match the second color calibration target.
3. The method of claim 1, further comprising initially outputting the second color
- 15 calibration target onto the media using the second color printing technology.
4. The method of claim 1, further comprising initially pre-matching the first color calibration target to the second color calibration target without outputting the first color calibration target onto the media.
5. The method of claim 1, further comprising iteratively repeating a number of
- 20 times outputting the first color calibration target, determining the color differences between the first color calibration target and the second color calibration target, and calibrating the first color printing technology based on the color differences, until the color differences are less than a threshold.
6. The method of claim 1, further comprising iteratively repeating a number of
- 25 times outputting the first color calibration target, determining the color differences

between the first color calibration target and the second color calibration target, and calibrating the first color printing technology based on the color differences, until a user is satisfied with the first color calibration target matching the second color calibration target.

- 5 7. The method of claim 1, wherein outputting the first color calibration target using the first color printing technology onto the media comprises outputting the first color calibration target using the first color printing technology onto the media having the second color calibration target preprinted thereon using the second color printing technology.
- 10 8. The method of claim 1, wherein the first color printing technology is an inkjet-color printing technology and the second color printing technology is an offset-color printing technology.
9. The method of claim 1, wherein the first color printing technology is a process color-printing technology, and the second color printing technology is a spot
- 15 color-printing technology.
10. The method of claim 1, wherein determining the color differences between the first color calibration target and the second color calibration target comprises:
- optically sensing the first color calibration target to yield first color calibration target values;
- 20 optically sensing the second color calibration target to yield second color calibration target values; and,
- determining the color differences between the first color calibration target and the second color calibration target based on differences between the first color calibration target values and the second color calibration target values.
- 25 11. The method of claim 1, wherein calibrating the first color printing technology so that subsequent output of the first color calibration target better matches the

second color calibration target comprises constructing one or more color maps for the first color printing technology to compensate for the color differences between the first color calibration target and the second color calibration target.

12. The method of claim 1, wherein calibrating the first color printing technology so that subsequent output of the first color calibration target better matches the second color calibration target comprises matching the first color calibration target with the second color calibration target by more than a threshold.

13. The method of claim 1, wherein calibrating the first color printing technology so that subsequent output of the first color calibration target better matches the second color calibration target comprises:

determining that the first color printing technology disallows matching the first color calibration target with the second color calibration target by more than a threshold;

determining one or more alternative colors for the first color calibration target; and,

enabling a user to select which of the one or more alternative colors to employ for the first color calibration target.

14. A computer-readable medium having a computer program stored thereon to perform a method comprising:

outputting a process color calibration target using a process color printing technology onto media having a spot color calibration target already output thereon using a spot color printing technology;

determining color differences between the process color calibration target and the spot color calibration target; and,

calibrating the process color printing technology based on the color differences between the process color calibration target and the spot color calibration target.

15. The medium of claim 14, wherein the method further comprising iteratively repeating a number of times outputting the process color calibration target, determining the color differences between the process color calibration target and the spot color calibration target, and calibrating the process color printing
5 technology based on the color differences.

16. The medium of claim 14, wherein the process color printing technology is a multiple-pass cyan-magenta-yellow-black (CMYK) color printing technology in which cyan, magenta, yellow, and black are combined to yield specific colors.

17. The medium of claim 14, wherein a color gamut of the process color printing
10 technology does not encompass the spot color calibration target, such that calibrating the process color printing technology comprises determining one or more alternative colors for the process color calibration target.

18. A system:
a color output device capable of outputting colors combined from base colors;
15 a sensing mechanism to measure the colors output by the color output device and to measure colors output by another color output device employing different technology than the color output device; and,
a matching mechanism to calibrate the color output device so that the colors
output by the color output device onto media better match the colors previously
20 output by the other color output device onto the media, based on measurements of the colors by the sensing mechanism.

19. The system of claim 18, further comprising the other color output device.

20. The system of claim 18, wherein the other color output device is capable of outputting spot colors without having to combine base colors.

21. The system of claim 18, wherein the color output device is a digital press device and the other color output device is an analog press device.

22. The system of claim 18, wherein the color output device is an inkjet-printing device.

5 23. The system of claim 18, wherein the base colors combined by the color output device comprise at least cyan, magenta, and yellow.

24. The system of claim 18, wherein the sensing mechanism comprises an optical sensor.

10 25. The system of claim 24, wherein the optical sensor is part of the color output device.

26. The system of claim 24, wherein the optical sensor is an external device communicatively connected to the matching mechanism.

27. The system of claim 18, wherein the matching mechanism comprises a computer program.

15 28. The system of claim 27, wherein the matching mechanism comprises a host computing device communicatively connected to the color output device and by which the computer program is executed.

29. The system of claim 27, wherein the computer program is executed by the color output device.

20 30. A system comprising:
 a combinatory color output device capable of outputting colors combined from base colors; and,

means for calibrating the combinatory color output device so that the colors output by the combinatory color output device onto media better match colors previously output by a spot color output device onto the media.

31. The system of claim 30, wherein the combinatory color output device is a
5 digital press device and the spot color output device is an analog press device.

32. The system of claim 30, wherein the combinatory color output device is an inkjet-printing device that is capable of outputting the colors by combining at least the base colors cyan, magenta, and yellow.

33. The system of claim 30, wherein the means is further for measuring the colors
10 output by the combinatory color output device and the colors output by the spot color output device, such that the means is for calibrating the combinatory color output device based on measurements of the colors.

34. A color image-formation device comprising:
a color image-formation mechanism capable of outputting colors onto media;
15 a sensing mechanism to measure the colors output by the color image-formation and to measure colors output by another color image-formation device employing different technology than the color image-formation mechanism; and,
a matching mechanism to calibrate the color image-formation mechanism so
that the colors output by the color image-formation mechanism onto the media
20 better match the colors output by the other color image-formation device, based on measurements of the colors by the sensing mechanism.

35. The color image-formation device of claim 34, wherein the color image-formation mechanism is capable of outputting the colors by combining base colors.

36. The color image-formation device of claim 35, wherein the base colors comprise cyan, magenta, yellow, and black.

37. The color image-formation device of claim 34, wherein the color image-formation mechanism is an inkjet-printing mechanism, and the color image-formation device is an inkjet-printing device.

38. A computing device:

a communicative mechanism receptive to communicative connection with a sensing mechanism that is capable of measuring colors output onto media using different color printing technologies; and,

a computer-readable medium having a computer program stored thereon to calibrate one of the different color printing technologies so that the colors output thereby onto the media better match the colors output by the other of the different color printing technologies, based on measurements of the colors by the sensing mechanism.

39. The computing device of claim 38, further comprising the sensing mechanism.

40. The computing device of claim 38, wherein the different color printing technologies comprise a digital press technology and an analog press technology.

41. The computing device of claim 38, wherein the different color printing technologies comprise a process color printing technology and a spot color printing technology.

42. The computing device of claim 38, wherein the different color printing technologies comprise an inkjet color printing technology and an offset color printing technology.